ENGINEERING REPORT

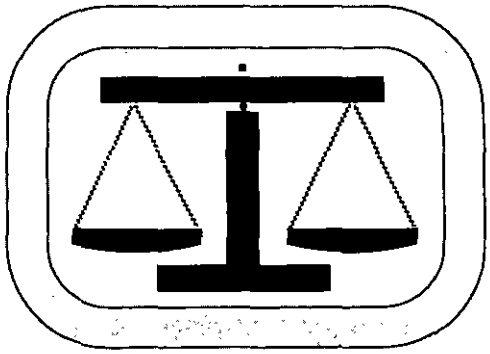
for

Contract DACW-33-81-C0030

Work Order Number 5

Environmental Investigation at Rockport Harbor

Rockport, Massachusetts



BRIGGS

TABLE OF CONTENTS

1.1 AUTHORIZATION

The work reported herein was performed under contract DACW-33-81-C-0030, Work Order No. 5 dated 8 April 1981.

1.2 PURPOSE

The purpose of this work was to obtain bottom sediment samples and water samples for bulk elutriate and chemical testing from locations within Rockport Inner Harbor, Old Harbor and Pigeon Cove as shown on the attached Figures 1, 2 and 3. To accomplish this work thirty-three (33) gravity core samples, thirteen (13) Grab samples, and twenty-four (24) gallons of water were obtained from the three harbors.

1.3 SCOPE OF INVESTIGATION

Samples were taken at the locations as shown on Figure 1, Figure 2, and Figure 3. The project was conducted on Monday 11 May 1981 through Wednesday 13 May 1981. The field exploration logs for all the attempted samples are included as Appendix A to this report.

Location A - Three gravity core samples were obtained, recovery ranged from one to three feet.

Location B - Seven gravity core samples were obtained, recovery ranged from one to three feet. Eight gallons of water for elutriate testing were obtained.

Location C - Three gravity core samples were obtained, recovery ranged from one to three feet.

Location D - Three grab samples were obtained.

Location E - Seven grab samples were obtained. Eight gallons of water for elutriate testing were obtained.

Location F - Three grab samples were obtained.

1.4 QUALITY ASSURANCE

We hereby certify that the following equipment, equipment preparation procedures and sampling procedures were used to perform the sampling outlined in this report:

Equipment

Sediment Sampling:

A gravity coring sampler containing a 2-5/8 inch ID minimum diameter plastic core liner insert with a vacuum assembly for containing the sample was used. All assembly surfaces exposed to the sample were teflon coated prior to use. The core liners used are made of cellulose acetate

buytrate and the end caps are tight fitting polyethylene.

A polyethylene bucket sampler was used to obtain the bottom grab samples. In Old Harbor, cores were attempted but due to the coarse granular nature of the bottom sediment no penetration was achieved. The grab samples were obtained at low tide directly off the bottom. The samples were secured in air tight heavy duty polyethylene bags prior to placement in covered plastic buckets.

Water Sampling:

Two Niskin type water samplers were used: a four liter PVC sampler and a four liter stainless steel sampler both with messenger triggers riding on 3/8 inch Dacron retrieval cable. On both samplers, no metal parts were exposed to the sample.

Water Samples were retained in either one gallon polyethylene containers with polyethylene screw caps or one gallon glass jugs with teflon-lined screw caps.

Equipment Preparation Procedure:

All the core liners were washed with ultrapure distilled water and the ends capped prior to use. The stainless steel water sampler was rinsed with spectrographic grade hexane and the PVC water sampler was prepared by first washing thoroughly with a detergent, rinsing with tap water, soaking in a 10% HCL solution for four hours and finally being rinsed with metal free (ultrapure) distilled water.

Sampling Procedure:

The sampling stations for elutriate, bulk chemical and physical testing were located by means of visual sights, sextant, and/or taping. Gravity core and grab samples were taken as specified by the work order. After recovery the core liners were maintained in an upright position at all times and the sample material was allowed to settle for a minimum of 15 minutes before a small hole was punched in the core liner just above the water/sediment interface. After being allowed to drain, the punched hole was sealed by taping. The core liners were cut off approximately two inches above the sediment surface and the polyethylene caps secured with tape.

Grab samples were sealed in polyethylene bags, with as much air removed as possible before being placed in sealed plastic buckets.

Water samples were obtained as directed in the work order. Both the polyethelyne and glass containers were filled to overflowing before being tightly capped.

Core liners, grab samples and water samples were

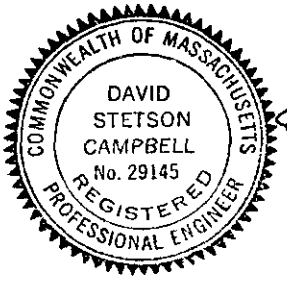
maintained between 1.0 degrees and 4.0 degrees celsius from the time of sampling to delivery to the NED laboratory in Waltham MA. A chain of custody log documenting the disposition of the samples is included with this report. Sampling and storage procedures were carefully monitored by our on-site Quality Assurance inspector, Mr. Jeffrey Shelkey, to insure strict adherence to the specifications.

The following designations were used to identify the various type of samples obtained for testing.

Gravity cores:	PF
Grab samples:	D
Water Samples:	EW

All core liners, Grab samples and water bottles were tagged with labels in waterproof bags containing the following information:

Project identification
Date and time of sampling
Location identification and sample designation
Sample numbers and sample depths
Signature of inspector



Certified 15 May 1981

David S. Campbell P.E.
Massachusetts No. 29145

BRIGGS ENGINEERING CORPORATION

Chain of Custody Log

Project: Rockport Harbor

Items:

Tubes 33

Bottles 16 Plastic 1gal, 16 glass 1gal - 32 total

Bag Samples 13 - 2gal.

Other 78 Environmental Exploration logs

Date & Time Received	Date & Time Transfered	Comments	Custodian
11may - 13 May as sampled	1630, 13 May 81	J B Skelkey Briggs	J. Skelkey
1630 13 May 81			Alain M. Raemi

BRIGGS ENGINEERING CORPORATION

WEEKLY SAFETY MEETING

TO: Safety Office, NED

FROM: Field Engineer — Date held 11 May 1981

THRU: Project Engineer — Time 0730hrs

Weekly safety meeting was held this date for the following personnel:
Contract No. DACW 33-81-C-0030 Personnel present J.Shelky(Briggs)
Work Order No. 5 K.Levitt(EG&G)
Conducted By J.Shelkey D.Levin(EG&G)
P.Pellitier(UNH)

1. Subjects discussed (Note, delete, or add):

- x Individual Protective Equipment -
  Prevention of Falls -
- x Safe Lifting Techniques -
  Emergency Communications -
- x Fire Prevention -
  Sanitation, First Aid -
  Tripping Hazards - trash, hose, nails in lumber -
  Staging, Ladders, Concrete Forms -
  Hand Tools -
  Portable Power Tools -
  Woodworking Machinery -
  Equipment Maintenance (Zero defects) -
- x Hoisting Equipment -
- x Ropes, Hooks, Chains and Slings -
  Electrical Grounding, Temporary Wiring -
  Lockouts for safe clearance procedures -
  Electrical, pressure, moving parts -
  Welding -
  Excavations -
  Loose Rock and Steep Slopes -
  Explosives -
- x Water Safety -
  Other -

Prepared by: Jeffrey Shelkey
Field Engineer

2. Exposure:
11 May 1981 thru 13 May 1981-5 men x 2 days x 8 hrs = 80 hrs.
3 men x 1 day x 7 hrs = 21 hrs

Signature:
Project Engineer

3. Forwarded: NED, Waltham, MA

APPENDIX A

Field Exploration Logs

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. A-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9.5'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.7' MLW
TIDEBOARD __
TIDE CURVE -0.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 21 1/2"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12.5'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1204 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. A-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8.5'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.9' MLW
TIDEBOARD __
TIDE CURVE -0.6
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 13"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 11'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1211 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. A-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8.5'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.9' MLW
TIDEBOARD __
TIDE CURVE -0.6
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 17"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 11'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1217 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 16'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.7' MLW
TIDEBOARD __
TIDE CURVE -3.3
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 35"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 19'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1047 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 21 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 16'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.1' MLW
TIDEBOARD __
TIDE CURVE -2.9
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 21"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 19'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1057 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 21 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 16'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.4' MLW
TIDEBOARD __
TIDE CURVE -2.6
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 26 1/2"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 19'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1104 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 21 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 15'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.8' MLW
TIDEBOARD __
TIDE CURVE -2.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 27"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 18'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1118 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 15'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.8' MLW
TIDEBOARD __
TIDE CURVE -2.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 21 1/2"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 18'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1125 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 14.5'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.7' MLW
TIDEBOARD __
TIDE CURVE -1.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 23"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 17.5'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1132 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. B-PF-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 14.5'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.7' MLW
TIDEBOARD __
TIDE CURVE -1.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 25"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 17.5'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1138 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 19'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.8' MLW
TIDEBOARD __
TIDE CURVE -6.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 0945 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 18'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.3' MLW
TIDEBOARD __
TIDE CURVE -5.7
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 0958 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 18'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.0' MLW
TIDEBOARD __
TIDE CURVE -5.0
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1010 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 18'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.3' MLW
TIDEBOARD __
TIDE CURVE -4.7
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1018 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 19'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.8' MLW
TIDEBOARD __
TIDE CURVE -6.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 0945 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 18'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.3' MLW
TIDEBOARD __
TIDE CURVE -5.7
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 0959 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 18'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.0' MLW
TIDEBOARD __
TIDE CURVE -5.0
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1013 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. B-EW-8

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 18'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.6' MLW
TIDEBOARD __
TIDE CURVE -4.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1025 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 25 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. C-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 13'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.6' MLW
TIDEBOARD __
TIDE CURVE -0.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 16"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 16'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1233 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. C-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 12.5'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 12.2' MLW
TIDEBOARD __
TIDE CURVE -0.3
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 16"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 15.5'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1241 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 12 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. C-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 14'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 13.8' MLW
TIDEBOARD __
TIDE CURVE -0.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 16"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 17'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 132 SECCHI DISC READINGS: pH _____
24 hr TIME: 1247 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. D-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 2.1' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 01220 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. D-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 2.1' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1222 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. D-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 2.1' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1225 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1245 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1250 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1253 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1257 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1302 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1305 REDOX _____
SEA STATE: -
WEATHER CODE 01 BLACK =
WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. E-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.5' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1310 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 4'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 4.8' ~~below~~ ABOVE MLW
TIDEBOARD __
TIDE CURVE 8.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 2' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0840 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 4'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 4.8' above MLW
TIDEBOARD __
TIDE CURVE -8.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 2' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0850 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 4'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 4.8' above MLW
TIDEBOARD __
TIDE CURVE -8.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 2' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0855 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 3'
LEAD LINE X
FATHOMETER __
REDUCED SOUNDING: 4.8' above MLW
TIDEBOARD __
TIDE CURVE -7.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 1' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0900 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 3'
LEAD LINE X
FATHOMETER __
REDUCED SOUNDING: 4.8' above MLW
TIDEBOARD __
TIDE CURVE -7.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 1' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0905 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 3'
LEAD LINE X
FATHOMETER __
REDUCED SOUNDING: 4.8' aboveMLW
TIDEBOARD __
TIDE CURVE -7.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 1' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0910 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 3'
LEAD LINE X
FATHOMETER __
REDUCED SOUNDING: 4.8' above MLW
TIDEBOARD __
TIDE CURVE -7.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 1' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0915 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey A. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. E-EW-8

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 3'
LEAD LINE X
FATHOMETER __
REDUCED SOUNDING: 4.8' aboveMLW
TIDEBOARD __
TIDE CURVE -7.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 1' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 0925 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. F-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.8' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1230 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. F-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.8' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1235 REDOX _____
SEA STATE: -
WEATHER CODE 01 BLACK =
WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 13 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER __ OTHER X

SAMPLE NO. F-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 0
LEAD LINE __
FATHOMETER __
REDUCED SOUNDING: 1.8' above MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom sands

MATERIAL DEPTH/RECOVERY: Surface

SAMPLE DISPOSITION: BAG X JAR __ LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 133 SECCHI DISC READINGS: pH _____
24 hr TIME: 1238 REDOX _____
SEA STATE: - BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES All samples shoveled into plastic bags using plastic bucket

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.2' MLW
TIDEBOARD __
TIDE CURVE -0.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 14"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 9'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1405 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES Switched to 1' core barrel-as 3' barrel is not necessary and increased free fall height.

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.2' MLW
TIDEBOARD __
TIDE CURVE -0.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 12"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1408 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.1' MLW
TIDEBOARD __
TIDE CURVE -0.9
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 14"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1412 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE -1.0
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 13"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1415 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.9' MLW
TIDEBOARD __
TIDE CURVE -1.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 13"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1418 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.8' MLW
TIDEBOARD __
TIDE CURVE -1.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 13"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1422 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. G-PF-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.8' MLW
TIDEBOARD __
TIDE CURVE -1.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 15"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 3'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1426 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 9.0' MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1215 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1220 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1227 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1233 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.9' MLW
TIDEBOARD __
TIDE CURVE -0.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1215 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1235 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE X
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1245 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. G-EW-8

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.9' MLW
TIDEBOARD __
TIDE CURVE -0.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1253 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. H-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 12'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.6' MLW
TIDEBOARD __
TIDE CURVE -4.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 18"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KG: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 0911 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. H-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 12'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.0' MLW
TIDEBOARD __
TIDE CURVE -4.0
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 25"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 0923 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. H-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 12'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.8' MLW
TIDEBOARD __
TIDE CURVE -3.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 26"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KG: 80kg FREE FALL: 12'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 0945 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 8'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 6.9' MLW
TIDEBOARD __
TIDE CURVE -1.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 12"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 10'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1047 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 9.5' MLW
TIDEBOARD __
TIDE CURVE -0.5
TIDE TABLE __

NUMBER OF ATTEMPTS: 3

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 22"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 11'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1120 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES Hitting gravel and cobbles-no sample moved boat about 25' south from Station 1

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 9.6' MLW
TIDEBOARD __
TIDE CURVE -0.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 15"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 10'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1125 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.6' MLW
TIDEBOARD __
TIDE CURVE -0.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 12"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 10'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1130 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.8' MLW
TIDEBOARD __
TIDE CURVE -0.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 12"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 10'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1145 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.8' MLW
TIDEBOARD __
TIDE CURVE -0.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 12"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 10'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1148 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. I-PF-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 9'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.9' MLW
TIDEBOARD __
TIDE CURVE -0.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 13"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KGS: 80kg FREE FALL: 10'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1200 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.5' MLW
TIDEBOARD __
TIDE CURVE -2.5
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1000 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

RIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.5' MLW
TIDEBOARD __
TIDE CURVE -2.5
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1005 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.8' MLW
TIDEBOARD __
TIDE CURVE -2.2
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1010 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-4

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.9' MLW
TIDEBOARD __
TIDE CURVE -2.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Water sample

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1010 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-5

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.1' MLW
TIDEBOARD __
TIDE CURVE -1.9
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1015 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-6

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.1' MLW
TIDEBOARD __
TIDE CURVE -1.9
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1020 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-7

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.6' MLW
TIDEBOARD __
TIDE CURVE -1.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1040 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE __ WATER X OTHER __

SAMPLE NO. I-EW-8

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 10'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 8.9' MLW
TIDEBOARD __
TIDE CURVE -1.1
TIDE TABLE __

NUMBER OF ATTEMPTS: 2

MATERIAL DESCRIPTION: Water sample-stainless steel and glass

MATERIAL DEPTH/RECOVERY: 3' above bottom

SAMPLE DISPOSITION: BAG __ JAR X LINER __ DISCARD _____

LINER LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:
GALLONS X TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 1050 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. J-PF-1

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 14'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 7.2' MLW
TIDEBOARD __
TIDE CURVE -6.8
TIDE TABLE __

NUMBER OF ATTEMPTS: 3

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 10", 11", 15", 15" sample was shipped

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KG: 80kg FREE FALL: 14'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 0815-0830 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

Using 3' core barrel with 4-20kg weights
Stiff bottom clay 10" penetration on 1st drop, 11" on second, 15" on third. Saved third sample for shipment.

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. J-PF-2

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 15'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 9.4' MLW
TIDEBOARD __
TIDE CURVE -5.6
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 19"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KG: 80kg FREE FALL: 15'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 0846 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Rockport Harbor DATE: 11 May 1981

SAMPLER TYPE:
KULLENBERG __ PISTON __ DREDGE __ CORE X WATER __ OTHER __

SAMPLE NO. J-PF-3

COORDINATES: NORTH _____ EAST _____

LOCATION METHOD:
TRANSIT __
RANGES __
SEXTANT __
VISUAL X
LORAN C __
TAPING __

SOUNDING: 15'
LEAD LINE __
FATHOMETER X
REDUCED SOUNDING: 9.6' MLW
TIDEBOARD __
TIDE CURVE -5.4
TIDE TABLE __

NUMBER OF ATTEMPTS: 1

MATERIAL DESCRIPTION: Bottom muds

MATERIAL DEPTH/RECOVERY: 17"

SAMPLE DISPOSITION: BAG __ JAR __ LINER X DISCARD _____

LINER LENGTH: 5'10" WEIGHT KG: 80kg FREE FALL: 16'

WATER SAMPLES:
GALLONS ____ TEMPERATURE ____
QUARTS ____ DOD ____
PINTS ____ SALINITY ____

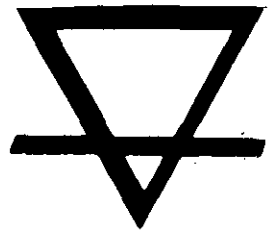
JULIAN DATE: 131 SECCHI DISC READINGS: pH _____
24 hr TIME: 0852 REDOX _____
SEA STATE: 0 BLACK =
WEATHER CODE 01 WHITE =

OPERATIONAL DIFFICULTIES _____

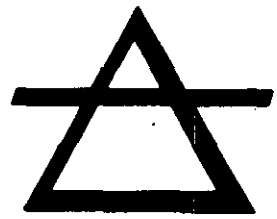
NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Jeffrey B. Shelkey

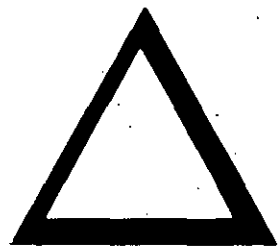
In ancient times
Greek and Hindu philosophers
believed that there were
four elements in the material universe
— EARTH, AIR, FIRE and WATER.
Over the years
man's knowledge has expanded
and the world of materials
is now known to be extremely complex.
The unravelling of these complexities
is the continuing goal of
Briggs Engineering & Testing Company.



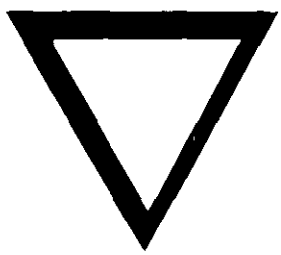
EARTH



AIR



FIRE



WATER

BRIGGS

Engineering and Testing

164 Washington Street, Norwell, Massachusetts 02061 Telephone (617) 773-2780